

REMARKS

Claims 1, 3 and 5 remain pending in this application with claims 1, 3 and 5 being amended and claims 2, 4, and 6 being cancelled by this response.

Objection to the Specification

The specification was objected to as not including the proper headings. The specification has been amended to add headings in their proper position. In view of the amendments to the specification, it is respectfully submitted that this objection is satisfied and should be withdrawn.

Rejection of Claims 1-6 under 35 U.S.C. 112, Second Paragraph

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 2, 4, and 6 have been cancelled by this response.

The claims have been amended in accordance with the comments of the Examiner to provide antecedent basis for all terms.

Claim 5 has been further amended in accordance with the comments of the Examiner for purposes of clarity and to recite the method for providing a symmetrical frequency response is accomplished with asymmetrical filters. Support for this amendment can be found throughout the specification and more specifically on page 2, lines 24-27; page 5, lines 24-26. Thus it is respectfully submitted that no new matter is added by these amendments to claim 5.

Accordingly, it is submitted that the rejection under 35 USC 112, second paragraph has been satisfied and withdrawal of the rejection is respectfully requested.

Rejection of Claims 1 and 2 under 35 U.S.C. 102(e)

Claims 1 and 2 stand rejected under 35 U.S.C. 102(e) as being anticipated by Van Der Woude et al. (U.S. 2002/0044021, S/N 09/862,283).

The present claimed invention recites a symmetrical filtering device which includes a first asymmetrical bandpass filter having a given central frequency and a given bandwidth. The device also includes a second asymmetrical bandpass filter identical to the first asymmetrical bandpass filter. A frequency transposition means is connected between the first asymmetrical filter and the second asymmetrical filter. The frequency transposition means transposes the central frequency of the first filter to the same central frequency while inverting the spectrum around the central frequency.

Van Der Woude describes a filter arrangement having a local oscillator having two band-pass filters and a mixer. The two band-pass filters have the same bandwidth f_B and center frequency f_c . The first band-pass filter has its output coupled to the input of the second band-pass filter by the mixer. The local oscillator is adapted to control the mixer.

Van Der Woude is concerned with providing a filter arrangement with a variable bandwidth and variable center frequency of the output signal (Paragraph 003). This objective is wholly unlike that of the present claimed invention, which provides a filtering device having a frequency response which is symmetrical, while retaining the advantages of an asymmetric bandpass filter such as a quartz crystal. Contrary to the present claimed invention which utilizes only asymmetric bandpass filters, Van Der Woude may utilize any type of filter in the filter arrangement. Furthermore, Van Der Woude is not concerned with utilizing asymmetric bandpass filters such as quartz crystals, or their respective properties, as in the present claimed invention. In fact, Van Der Woude does not discuss any particular type of bandpass filter in its filter arrangement. Van Der Woude would only choose between asymmetrical or symmetrical filters in order provide a particular bandwidth and center frequency of the output signal (Paragraph 0003). In view of the objectives of Van Der Woude, there is no reason or

motivation to use asymmetrical filters for producing a symmetrical response as in the present invention as Van Der Woude is not concerned with this objective. This is wholly unlike the present claimed invention, which provides a filtering device utilizing two asymmetric bandpass filters to produce a frequency response which is symmetrical. Thus, Van Der Woude neither discloses nor suggests a “symmetrical filtering device comprising: a first asymmetrical bandpass filter having a given central frequency and a given bandwidth, [and] a second asymmetrical bandpass filter identical to the first asymmetrical bandpass filter” as recited in claim 1 of the present invention.

Claim 2 has been cancelled by this response. In view of the cancellation of claim 2, it is respectfully submitted that the rejection with respect to claim 2 is now moot and should be withdrawn.

In view of the above remarks and amendments to claim 1, it is respectfully submitted that this claim is patentable over Van Der Woude. Withdrawal of the rejection under 35 U.S.C. 102(e) of claims 1-2 is respectfully requested.

Rejection of Claims 3, 5 and 6 under 35 U.S.C. 103(a)

Claims 3, 5 and 6 stand rejected under 35 U.S.C. 103(a) as being anticipated by Van Der Woude et al. (U.S. 2002/0044021).

Claim 3 is dependent on independent claim 1. Claim 3 further recites a device wherein the first and second asymmetrical filters are quartz filters.

Van Der Woude is concerned with providing a filter arrangement with a variable bandwidth and variable center frequency of the output signal, which requires a minimal number of cheap circuit elements (Paragraph 003). This objective is wholly unlike that of the present claimed invention, which provides a filtering device having a frequency response which is symmetrical, while retaining the advantages of an asymmetric

bandpass filter such as a quartz crystal. Contrary to the present claimed invention, which only uses asymmetrical filters, Van Der Woude may utilize any type of filter in the filter arrangement. Furthermore, Van Der Woude is not concerned with utilizing asymmetric bandpass filters such as quartz crystals, or their respective properties, as in the present claimed invention. Thus, Van Der Woude neither discloses nor suggests a device “wherein the first and second asymmetrical filters are quartz filters” as recited in claim 3 of the present invention.

The Office Action admits on Page 4 that “[Van Der] Woude...does not disclose that the filters are the quartz filters or asymmetrical filter” as described in the present claimed invention. However, the Office Action also states that “selecting the ... filter for the circuit of Van Der Woude et al is considered to be a matter of design.” However, Van Der Woude would only choose between asymmetrical or symmetrical filters in order provide a particular bandwidth and center frequency of the output signal (Paragraph 0003). In view of the objectives of Van Der Woude, there is no reason or motivation to use asymmetrical filters for producing a symmetrical response as in the present invention as Van Der Woude is not concerned with this objective. This is wholly unlike the present claimed invention, which provides a filtering device utilizing two asymmetric bandpass filters to produce a frequency response which is symmetrical. Thus, Van Der Woude neither discloses nor suggests “a method for providing a symmetrical frequency response with asymmetrical filters” as recited in claim 5 of the present invention.

Claim 6 has been cancelled by this response. In view of the cancellation of claim 6, it is respectfully submitted that the rejection with respect to claim 6 is now moot and should be withdrawn.

In view of the above remarks, Applicants respectfully submit that Van Der Woude provides no 35 USC 112 compliant enabling disclosure that makes claims 3 and 5 unpatentable. Therefore, Applicant further respectfully submits that this rejection has been satisfied and should be withdrawn.

Rejection of Claim 4 under 35 U.S.C. 103(a)

Claim 4 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Scherer et al (US 6,844,939) in view of Van Der Woude et al. (US 2002/0044021, S/N 09/862,283).

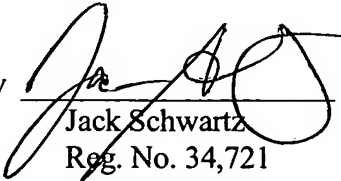
Claim 4 has been cancelled by this response. In view of the cancellation of claim 4, it is respectfully submitted that the rejection with respect to claim 4 is now moot and should be withdrawn.

In the event there are further issues remaining in any respect the Examiner is respectfully requested to telephone attorney to reach agreement to expedite issuance of this application.

Should the Examiner feel that anything further is necessary to place this application in condition for allowance he is respectfully requested to contact applicants attorney at the telephone number listed below.

No other fee is believed due. However, if an additional fee is due, please charge the fee to Deposit Account 07-0832.

Respectfully submitted,
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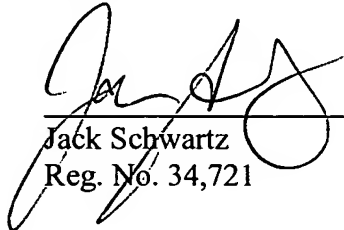
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